

ABSTRACT

High-intensity, spiked noise is reduced in chromatography-mass spectrometry data by applying a nonlinear filter such as a moving median filter to the data. The filter is applied to individual mass chromatograms, plots of ion abundance versus retention time for each detected mass-to-charge ratio, and the filtered chromatograms are combined to form a filtered total ion current chromatogram. Standard linear filters are not effective for reducing noise in liquid chromatography-mass spectrometry (LC-MS) data because they assume a normal distribution of noise. LC-MS noise, however, is not normally distributed.

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